

Orthotrichum microblepharum Schimp., and *Eurhynchium Stokesii* (Turn.) Bry. Eur.; Victoria County *Camptothecium nitens*, var. *falcifolium* Ren. apud Nichols, and *Drepanocladus revolvens* (C. Muell.) Warnst.—GRAND FALLS, NEW BRUNSWICK.

NOVELTIES IN HERMIDIUM (NYCTAGINACEAE)
AND ASTRAGALUS (LEGUMINOSAE) FROM
EASTERN UTAH¹

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THE three novelties proposed below, all from the semi-desert area about five to six miles south of Vernal, Uintah County, Utah, were encountered during the favorable spring growing season of 1950. At that time the area was called to my attention by Dr. J. W. Hamilton and Prof. O. A. Beath, both of the Research Chemistry Department of the University of Wyoming, who first noticed the peculiar Astragali growing there and brought back specimens of them for me to examine. Being convinced that both were new, a collecting trip was made to the area and material of both Astragali was collected in quantity; and at the same time the *Hermidium* was discovered growing under the cap-rock of the canyon and likewise collected in quantity.

An attempt was made in the following year to recollect these plants when the area was revisited in June, 1951; but due to a severe drought in the area not a single plant of any of them could be found. Hillsides which had been covered with luxuriant vegetation the year before were now barren.

The type specimens of these proposed novelties are deposited in the Rocky Mountain Herbarium of the University of Wyoming. Duplicates will be distributed to the leading herbaria in the near future.

***Hermidium alipes* S. Wats.,² var. *pallidum* var. nov.**

A specie calycibus albis distinguendum.

Distinguished from the species by the white calyx.

TYPE: *C. L. Porter 5308*, on the Wasatch formation, 5 miles south of Vernal, Uintah County, Utah, June 3, 1950. Elevation about 5,200 ft.

¹ Contributions from the Department of Botany and the Rocky Mountain Herbarium, University of Wyoming, no. 220.

² S. Watson in King, Geol. Expl. 40th. Par. 5: 286. pl. 32. 1871.

The monotypic genus *Hermidium* has hitherto been known to me only from western Nevada and adjacent California, and from a single station (8 miles northeast of Troutcreek, *Maguire & Becraft 2579*) in western Juab County, Utah. The species regularly produces flowers with a purplish calyx, the color usually becoming accentuated in drying. The proposed variety showed no trace of purple coloration of flowers in the several large plants seen, and it extends the known range of the genus considerably to the eastward.

***Astragalus* (*Lonchopaca*) *hamiltoni* sp. nov.**

Herba perennis, 4–5 dm. alta, cum radice lignosa et caudice breve. Caules erecti, ex eadem basi aliquot, strigosi cum pilis planis, albis, appressis. Stipulae deltaformes, acutae, 2–5 mm. longae et 2–4 mm. latae ad basim. Folia pinnata, 3–7 (plerumque circa 5) cm. longa, pallide viridia et strigosa, foliolis 3–7 (plerumque circa 5), oblongis, plerumque rotundis ad apicem, 3–7 mm. latis et 10–30 mm. longis, ad axem irregulariter insertis, foliolis superioribus plerumque non oppositis et foliolo terminale cum rachide continuo. Pedunculi erecti, terminales et axillares, 3–10 cm. longi; racemi multiflores, 2–6 cm. longi, et racemis et pedunculis productionibus post anthesin; bracteae subulatae, circa 1 mm. longae. Pedicelli mox recurvascentes, 1–3 mm. longi. Calyx campanulatus, pallide viridis, sed demum fuscus, strigosus, cum tubo 5–6 mm. longo et dentibus angustis triangularibus, circa 1 mm. longis. Corolla ochroleuca vel pallide flava, sed exsiccata sulphurea, 16–18 mm. longa, vexillo mediocriter arcuato, alis vexillum fere aequantibus, et petalis carinatis 2–3 mm. brevioribus. Siliquae aliquantulum strigosae, praesertim versus basin et in suturis, cum stipite 10–12 mm. longo calycem excedente, corpore subcylindrico ad basim apicemque acuto, saepissime 25–30 mm. longae, 5–6 mm. crassae, sectione transversa uniloculares. Semina reniformia, numerosa.

Plants perennial, 4–5 dm. high, with a woody root and short caudex. Stems erect, several from the base, strigose with flat, white, appressed hairs. Stipules deltoid, acute, 2–5 mm. long and 2–4 mm. wide at the base. Leaves pinnate, 3–7 (mostly about 5) cm. long, pale green and strigose, the leaflets 3–7 (commonly about 5), oblong, mostly rounded at the apex, 3–7 mm. wide and 10–30 mm. long, irregularly attached to the rachis, the upper leaflets commonly not paired and the terminal one continuous with the rachis. Peduncles erect, terminal and axillary, 3–10 cm. long; racemes several-flowered, 2–6 cm. long, both the racemes and peduncles elongating after anthesis; bracts subulate, about 1 mm. long. Pedicels soon recurved, 1–3 mm. long. Calyx campanulate, pale greenish, turning brown in age, strigose, the tube 5–6 mm. long, the teeth narrowly triangular, about 1 mm. long. Corolla ochroleucous or pale yellowish,

drying sulphur-yellow, 16–18 mm. long, the banner moderately arched, the wings nearly equaling the banner, the keel-petals 2–3 mm. shorter. Pods somewhat strigose, especially toward the base and on the sutures, with a stipe 10–12 mm. long and exceeding the calyx, the body subcylindric and pointed at both ends, mostly 25–30 mm. long and 5–6 mm. thick, 1-celled in cross section. Seeds reniform, numerous.

TYPE: *J. W. Hamilton & O. A. Beath*, s. n., on the Wasatch formation, 5 miles south of Vernal, Uintah County, Utah, May 24, 1950. Elevation about 5,200 ft. PARATYPE: *C. L. Porter 5313*, from the same locality, June 3, 1950.

The proposed species appears to be most closely related to *Astragalus lonchocarpus* Torr., from which it may be distinguished by its much broader leaflets and by its subcylindric and relatively broader and strigose pods. In Rydberg's key to the species of *Lonchophaea* (N. Am. Fl. 24: 312. 1929) this plant would run to his *L. macra* which was based on *Astragalus macer* A. Nels. (type seen) which is a clear synonym of *Astragalus lonchocarpus* Torr. It is a pleasure to name it for Dr. J. W. Hamilton who first noticed it in the field and called it to the attention of the writer. Chemical analyses of the plants have shown them to be non-seleniferous, as is true of other members of the group.

***Astragalus (Homalobus) spectabilis* sp. nov.**

Herba perennis, viridis, 1–2 dm. alta, e caudice ramoso caespitosa in summitate longae radicis primariae. Caules erecti, in partibus vetustioribus reliquiis persistentibus petiolorum et stipulorum obductis, cum internodiis brevissimis. Stipulae ovato-lanceolatae chartaceae, circa 8 mm. longae et 3 mm. latae ad basim. Folia pinnata, plerumque 5–9 cm. longa, strigosa cum pilis gracilibus dolabriformibus, foliolis saepe 5–7, anguste linearibus vel spatulatis variantibus, apice acutissimis, plerumque 15–35 mm. longis, 1–4 mm. latis, foliolis 3 vel 5 terminalibus saepe perpropinquis. Pedunculi erecti et terminales, 6–12 cm. longi, folia vix excedentes; racemi 3–10-flores, 1.5–3 cm. longi, vix elongati post anthesin; bracteae lanceolatae, hyalinae, nervus medius viridis, circa 5 mm. longae. Pedicelli ascendentes, 1–2 mm. longi. Calyx campanulatus, strigosus cum pilis nigris et albis mixtis, cum tubo circa 5 mm. longo et dentibus subulatis circa 4 mm. longis. Corolla puniceo-purpura, sed exsiccata cyaneo-purpura, 15–20 mm. longa, cum vexillo moderate arcuato et praeter alas et petala carinata excedente. Siliquae ascendentes, rectae vel moderate curvatae, cum lateribus complanatis et suturis prominentibus parallelis, ad basim rotundae et sessiles, abrupte ad apicem brevimucronatae, plerumque 2.5–3.5 cm. longae et 4–5 mm. latae (siliquis typi subimmaturis), sparsim strigosae, sectione transversa uniloculares. Semina reniformia, numerosa.

Plants perennial, green, 1–2 dm. high, from a branched caespitose caudex at the summit of a long taproot. Stems erect, the older parts covered with the persistent remains of petioles and stipules, the internodes extremely short. Stipules ovate-lanceolate, papery, about 8 mm. long and 3 mm. wide near the base. Leaves pinnate, mostly 5–9 cm. long, strigose with slender dolabriform hairs, the leaflets mostly 5–7, varying from narrowly linear to spatulate, sharply acute at the apex, mostly 15–35 mm. long and 1–4 mm. wide, the terminal 3 or 5 leaflets often closely approximate. Peduncles erect and terminal, 6–12 cm. long, just surpassing the leaves; racemes 3–10-flowered, 1.5–3 cm. long, not elongating much after anthesis; bracts lanceolate, hyaline except for the green midnerve, about 5 mm. long. Pedicels ascending, 1–2 mm. long. Calyx campanulate, strigose with intermixed black and white hairs, the tube about 5 mm. long, the subulate teeth about 4 mm. long. Corolla pinkish-purple, drying dark blue-purple, 15–20 mm. long, the banner moderately arched and exceeding the wings and keel-petals. Pods ascending, straight or slightly curved outward, laterally flattened, with both sutures prominent and parallel, rounded at the base and sessile, abruptly short-pointed at the apex, mostly 2.5–3.5 cm. long and 4–5 mm. wide (those of the type not quite mature), sparsely strigose, the cross section 1-celled. Seeds reniform, numerous.

TYPE: *C. L. Porter 5309*, on red sandy slopes of the Wasatch formation, in a canyon about 5 miles south of Vernal, Uintah County, Utah, June 3, 1950. Elevation about 5,200 ft. PARATYPE: *J. W. Hamilton & O. A. Beath*, s. n., from the same locality, May 24, 1950.

Astragalus spectabilis is readily referred to the subgenus *Homalobus*, and it seems to have affinities with the section *Campestres*, to which it would key in Rydberg's treatment (N. Am. Flora 24: 256. 1929), but it has larger and more brightly-colored flowers than is typical of that complex, and the banner is not so strongly arched. It is a strikingly handsome plant when in bloom, and might well be worth cultivating in rock gardens. It is non-seleniferous.

A NOTE ON HALIMOLOBOS.—Each time populations of *Halimolobos virgata* (Nutt.) Schulz have been examined in the high valleys of the main chain of the Rocky Mountains and in the foothills of the Uinta Mountains, I have been impressed by the differences in the plants of these two areas and the habitats in which they occur. In South Park, Colorado, and in the Laramie Range between Laramie and Cheyenne, Wyoming, plants of this species grew erect in open grassy meadows. In the foothills northeast and north of the Uinta Range, in Utah and adjacent